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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/632,180	08/03/2000	Vadim Lubomirsky	C34932/111613	9765
27572	7590	03/24/2004	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C.			BURD, KEVIN MICHAEL	
P.O. BOX 828			ART UNIT	
BLOOMFIELD HILLS, MI 48303			PAPER NUMBER	

2631
DATE MAILED: 03/24/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/632,180

Applicant(s)

LUBOMIRSKY, VADIM

Examiner

Kevin M Burd

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-79 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-79 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 7/30/2001 is being considered by the examiner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roylance et al (US 6,390,579) in view of Ng et al (US 6,011,679).

Regarding claims 1, 12-16, 24-31, 37-40, 45-48, 51-56, 61-64 and 73-79, Roylance discloses a pulse width modulation controlling circuit for outputting an output signal capable of providing a plurality of repeatable output pulses (figure 1). A signal (Pclock) is generated and is input to the calibrate state machine through the series of D flip-flops shown in figure1. The calibrate state machine includes a counter for counting to a predetermined value and this counter is used to change the adjustable delays shown in figure 1 (column 10, lines 53-67). The newly adjusted delays output signals to the flip-flops controlling the PWMout signal 24. Roylance does not disclose the pulse width modulation controlling circuit is used for a power supply. However, Ng discloses it is well known in the art of power supply circuitry to use a pulse width modulator to

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generate a power supply output voltage. The PWM circuit allows the output voltage to be easily changed when necessary (column 5, lines 15-31). It would have been obvious for one of ordinary skill in the art at the time of the invention to use the PWM controlling circuit of Roylance to output a power supply voltage as shown by Ng for the reason stated above.

Regarding claims 2, 3, 17, 18, 19, 32, 33, 49, 50, 65 and 66, the counting means is digital and a programmable logic device (figure 1, element 28).

Regarding claims 4, 5, 20, 34, 35, 67 and 68, the state machine will be clocked at a set frequency. The clocking frequency is a design choice.

Regarding claims 6, 36 and 69, the amount of delay is a design choice to allow a just right indicator to be set when appropriate (column 10, lines 59-67).

Regarding claims 7-9, 21-23, 41-44, 57-60 and 70-72, the delay means shown in figure 1 are digital. However, it would have been obvious for one of ordinary skill in the art at the time of the invention to use analog delays instead of digital delays. The cost for analog delays is small and would reduce the price of the overall circuitry.

Regarding claims 10 and 11, the delay value is selected according to the feedback signal from the calibrate state machine.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Del Signore, II (US 4,833,375) and Gose et al (US 5,675,297) discloses pulse width modulation systems for controlling a power supply where a

counter determines the amount of delay in abstract and column 2, lines 18-51 (Del Signore) and in abstract and column 5, line 57 to column 6, line 21 (Gose).

Contact Information

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for formal communications intended for entry or for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Burd, whose telephone number is (703) 308-7034. The Examiner can normally be reached on Monday-Thursday from 9:00 AM - 6:00 PM.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3800.



Kevin M. Burd
PATENT EXAMINER
3/19/2004